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MINISTRY OF HEALTH.

NUTRITION.

Report of Conference between representatives of the Advisory Committee on Nutrition and representatives of a Committee appointed by the British Medical Association.

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After examination of the position it became clear to the conference that the divergencies were more a matter of misunderstanding and misinterpretation than of actual fact.

In the first place it is desirable for a proper understanding of the position that the nature and objectives of the two Committees should be made clear.

The Ministry's Committee is a permanent advisory body first appointed in January, 1931, by the then Minister of Health, Mr. Arthur Greenwood. The duties of the Committee are to advise the Minister on the practical application of modern advances in knowledge of nutrition. The Committee consists of workers with a special knowledge of nutrition, who, as occasion demands, place their scientific knowledge at the disposal of the Minister and his staff to assist him and his department in administrative action. It does not possess any authority, nor does it attempt to give advice on economic matters. In their memorandum "The Criticism and Improvement of Diets," the Committee recommended 3,000 calories and 37 grammes of first-class protein, or thereabouts, as adequate to supply the needs of the average "man" of the entire population of the country. *These recommendations were intended as a rough guide to medical officers of health so as to assist them in placing the nutrition of communities and institutions under their charge on a proper basis.* These values, being statistical averages, were meant to be applied to whole communities and not to individuals or even to single families. It is in this respect that the purpose of their recommendations differed most markedly from those published by the British Medical Association's Committee.

It is necessary also to point out that the responsibility for these and other recommendations made by the Advisory Committee belongs to the members of the Committee entirely and not to the Ministry of Health; and further, that in the above-quoted memorandum no recommendations of an economic nature were put forward.

The British Medical Association's Committee, on the other hand, is not a permanent body, but was a special *ad hoc* committee assembled for a specific purpose, "to determine the minimum weekly expenditure on foodstuffs which must be incurred by families of varying size if health and working capacity are to be maintained, and to construct specimen diets."

The terms of reference thus involved a task of a financial nature, but in order to discharge this the Committee had to decide on the food allowances necessary to maintain health and working capacity. In coming to a decision they thought naturally of unemployed men and their families and bore in mind that many unemployed spend a good deal of their time working on allotments, going to and from labour exchanges and places of employment in search of work, or else in keeping themselves in good physical condition by daily exercise in training centres. And since the food requirements of the individual depend on the amount of physical exercise taken, the Committee felt justified in recommending 3,400 calories and 50 grammes of first-class protein per "man equivalent" as essential to maintain the health and working capacity of a family of this type. The Committee regarded these figures as sufficient to cover a wastage of ten per cent., but did not suggest that they should be applied to the population as a whole or even to communities or institutions. It can thus be seen that, whereas the British Medical Association's Committee confined their attention to single active families, the Ministry's Committee had in view communities of people many of whom lead comparatively inactive lives.

The conference considers it important to emphasise the fact that nutrition and dietetics, dealing as they do with physical and chemical changes inside the body, most of which are imperfectly understood, cannot be considered exact sciences. The calorie is merely a convenient unit for measuring the energy-content of food and the energy-output of the body. Furthermore, it must be clearly recognised that owing to individual differences in physique, personal habits, likes and dislikes, and the variations in the degree of muscular effort involved in different occupations, it is not only impossible to define but also there does not in fact exist, any standard of food requirement which can be rigidly applied to all men alike. If such a standard were defined and universally applied, it would at once be found that, while some individuals were satisfied, others would have either too much or too little. The amount of physical work, housing conditions, clothing, climate and personal characteristics are factors influencing the need and desire for food which have to be considered when dealing with individual men.

It appears, therefore, that a workable solution of the problem of physiologically desirable dietary standards for individuals can only be found in a sliding scale of calorie needs based on age, individual physique, occupation and habits. On the other hand, in the case of mass calculations of the total food requirements of the population as a whole, where the question of distribution to individuals or purchasing by single families does not arise, or in the case of communal feeding, the difficulty of the standard ration being suited to the needs of each individual is largely overcome by the give and take in the food demands of the various individuals making up the community.

It is indeed a fact that, while certain limited classes of men need well above 3,400 calories per day, others need less than 3,000, and therefore, the sliding scale of calorie needs now put forward by the conference has been constructed in the hope that it may provide authorities with a satisfactory working basis on which to determine the needs of individual men and families of varying composition. Such a sliding scale should not, however, be interpreted in too rigid a sense, for the unique nature of each individual's food requirements cannot be too strongly emphasised. The sliding scale adopted by the conference is shown below :—

SLIDING SCALE OF CALORIE REQUIREMENTS PER DAY.

Individuals.	*Calories gross.*
Man : heavy work	3,400—4,000
„ moderate work	3,000—3,400
„ light work	2,600—3,000
Woman : active work	2,800—3,000
„ housewife	2,600—2,800
Boy : 14—18	3,000—3,400
Girl : 14—18	2,800—3,000
Child : 12—14	2,800—3,000
„ 10—12	2,300—2,800
„ 8—10	2,000—2,300
„ 6—8	1,700—2,000
„ 3—6	1,400—1,700
„ 2—3	1,100—1,400
„ 1—2	900—1,100

The conference also agrees that the all-round average requirements of the entire population or of large mixed groups of people at the present time is about 3,000 calories per day. This figure can safely be employed for calculations of mass requirements, but, in the case of individuals and single families due regard should be paid to the sliding scale detailed above.

Of as great significance to health as calories are the proteins, minerals and vitamins in the foodstuffs which go to build up the tissues of the body. Because of the special needs associated with the growth and development of new tissue, proteins, minerals and vitamins are particularly important for children and expectant and nursing mothers.

The general statements recited in regard to standards in respect of calorie requirements apply also to the needs of individuals, families and communities for protein. Accumulated evidence indicates that the total daily need for protein per man unit probably lies between 80 and 100 grammes, that is from 2⅘ to 3½ ounces. The precise amount of protein needed by any particular individual depends on physique, occupation, habits, personal tastes and age, while climate appears also to be a factor of some importance. There is a general consensus of opinion that a certain proportion of the total protein should be in the form of first-class protein, *i.e.*, protein of animal origin such as milk eggs, cheese, meat or fish. The desirable proportion of animal protein to total protein has, so far as our knowledge goes, never been exactly determined ; but we are convinced from the evidence which is available that the growing child and the expectant and nursing mother require relatively large amounts of first-class protein, much more indeed than would be arrived at by simple calculation based on their man-value equivalents.

All recent studies on the nutrition of children have shown that milk is for them a most valuable food. It is indeed the only naturally balanced food we know of, containing as it does in readily available form not only first-class protein (18.7 grammes or ⅔ oz. to the pint) but also minerals, vitamins, carbohydrate and fat. The conference therefore desires to stress the importance of this highly nutritious food for the child and the nursing and expectant mother. Both the Ministry's Committee and the Committee of the British Medical Association were mindful of these facts in regard to the special needs of the child, and both stressed the importance for children of the provision and consumption of milk in adequate quantities.

In the case of the adult the conference is of the opinion that a diet to be reasonably adequate should always contain a proportion of protein of animal origin: and that on the basis of accepted dietaries, which have stood the test of practical experience, this proportion should not be lower than one-third of the total protein consumed, and may perhaps with advantage be increased to a half.

In applying these recommendations to individuals it must be remembered that in the case of both children and adults the foregoing statements are generalisations, which may well be qualified by individual tastes and variations and, moreover, it should be pointed out that all proteins of animal origin do not necessarily possess the same nutritional value.

The members of the conference deplore the exaggerated importance which has been attached to the alleged disagreement between the two committees, and wish to avail themselves of this opportunity of stating that there did not exist, nor does there exist now, any fundamental disagreement on matters of scientific fact between the two bodies.

In conclusion it may be said that it is the earnest hope of the conference that these recommendations will prove of practical value to local authorities and others, and will enable them to place the nutrition of those under their charge both individually and collectively on a sound basis, in the interests of the health, fitness and well-being of the nation.

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